

MASS. EA10.2: 694/2

Guidelines for  
Operations  
And  
Land  
Stewardship

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AUG 13 1992  
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# Freetown – Fall River State Forest

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## EXECUTIVE SUMMARY

September 1990



Massachusetts Department of Environmental Management

Publication No. 17,113-38-100-5-92-.82-C.R.

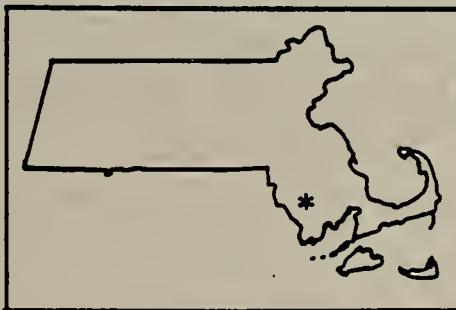
Approved by: Philmore Anderson III, State Purchasing Agent

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# LOCUS



## INTRODUCTION

### DESCRIPTION AND PURPOSE OF THE GOALS PLAN

The citizens of Massachusetts are fortunate to live in an area with a great diversity of natural areas, ranging from coastal to montane environments. The Department of Environmental Management (DEM) is responsible for the management of over a quarter million acres of state forest and park land. DEM properties are managed for integrated uses including; recreation, wildlife and water conservation, utilization of forest products, and preservation of unique natural and cultural sites. DEM's mandate can be taken in part from a 1972 amendment (Article 97) to the Massachusetts Constitution ... "The people shall have the right to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic and aesthetic qualities of their environment; and the protection of the people in their right to the conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources is hereby declared to be a public purpose..."

The GOALS program (Guidelines for Operations And Land Stewardship) affords the DEM a flexible structure to facilitate development of management plans. There are six important elements in the GOALS structure:

Define the Area and Identify a Theme: The natural and man-made features of the facility are inventoried including their ecological relationship, public use, and relationship with nearby communities. This provides baseline data and information upon which planning can be carried out. The theme is based on existing features and conditions of the property as well as DEM's intentions for future management.

Identify Issues and Opportunities: Early in the planning process the resource and public-use problems, conflicts and opportunities are identified so they can be adequately researched and addressed in the plan.

Land Stewardship Zoning: Using a resource management zoning classification, the forest or park is divided into separate zones based on many factors which should ensure that the resource values are upheld. This zoning system is the cornerstone of GOALS and will be discussed in further detail in Chapter 4.

Action Recommendations: Based on an analysis of the inventoried resources, planning issues, and the resulting zoning scheme, specific action recommendations and objectives are developed to guide the management of the properties during a ten-year period. Specifically, those recommendations will be reflected in the annual work plan and operational and capital budget requests for the properties.

Public Participation: To facilitate public participation in the management of Freetown State Forest and the Acushnet Cedar Swamp State Reservation, an Advisory Council was established and began meeting on a monthly basis in January, 1989. The Council is composed of residents from the Towns of Freetown and Dartmouth, the Cities of Fall River and New Bedford, and recreational user group members from other municipalities in southeastern Massachusetts. The Council members and other regular participants bring many forms of expertise to the planning process. Monthly meetings of the Council provide an opportunity for members and DEM staff to discuss the issues and opportunities at the properties and the GOALS planning process. DEM solicited recommendations from the Council on various management issues and considered them in developing the plan.

The Advisory Council with the DEM was a co-sponsor of a public meeting that took place in May, 1989. This meeting gave citizens an opportunity to bring up specific concerns about management of the property. A second public meeting will be held to review this draft plan to ensure that public concerns were addressed and to inform the general public of the plan's management recommendations. A final plan will then be developed, incorporating input from the Advisory Council and both the public meetings.

GOALS plans in other State Forests and Parks have benefitted greatly from the meetings and discussions with the public, especially the Advisory Council. The Councils have served as a good sounding board for the conclusions and recommendations of the planning team. They have provided constructive ideas for management of the state land and have provided assistance in gathering information and resolving issues.

Periodic Evaluation and Update: The recommendations in this GOALS plan will be annually reviewed and updated, as necessary, to consider changes in the natural and man-made resources and recreational demand upon the Forests. Public input will also be solicited at the time of future evaluations.

To conduct the GOALS planning process DEM has assembled a core team of personnel that is composed of a GOALS Planner, the Forest and Park Supervisor, the Regional and Assistant Regional Forest and Park Supervisors, and the Management Forester. This core team is directly responsible for developing the plan. A secondary team is composed of the Bristol County District Fire Warden, the Division of Fisheries and Wildlife's District Wildlife Manager, and the Bureau of Shade Tree Management and Pest Control's District Supervisor. Assistance is obtained from these individuals when questions arise in their particular areas of expertise. One of the major benefits of the team approach is a strong tie between plan development and implementation of plan recommendations.

## DEPARTMENT OF ENVIRONMENTAL MANAGEMENT DESCRIPTION

The Department of Environmental Management works to protect and enhance State Forest and Park land and water for recreational uses and sustained yield of natural resources. The GOALS program helps in the development of sound land use plans and policies for the enjoyment of these resources.

DEM is one of five departments within the Executive Office of Environmental Affairs. It was reorganized in 1974 from the former Department of Natural Resources. The Department has responsibility for state forests, parks, rinks, pools, beaches, flood management areas, timber lands and reservations. DEM facilities meet the outdoor recreational demands of over eleven million people each year.

The Commissioner of DEM supervises three major Divisions: the Division of Forests and Parks, the Division of Resource Conservation, and the Division of Administrative Services. In addition, the Commissioner is supported by the Office of Communications and a legal staff. Since the Division of Resource Conservation and the Division of Forests and Parks are directly involved in this plan, these two units will be described in detail.

### Division of Forests and Parks

The Division of Forests and Parks manages over 170 forests, parks, reservations, rinks and pools throughout Massachusetts that comprise one of the largest forest and park systems in the nation. Coastal beaches and marshes, freshwater lakes, forested ecosystems in all types of terrain, and historic sites are all among the types of areas within the system. Heritage State Parks are located in nine urban areas and provide much needed open space in cities, encourage economic development and revitalization, and provide opportunities for the public to gain an appreciation of the cultural heritage and history of some of the Commonwealth's urban centers.

The Division is also actively involved in forest management on public and private lands (Bureau of Forest Development), forest fire prevention, detection and suppression (Bureau of Fire Control), insect and disease control programs (Bureau of Shade Tree Management and Pest Control), and urban services (Bureau of Urban Services).

Five forest and parks regions have been established in the Division: southeast (Region 1), northeast (Region 2), central (Region 3), Connecticut Valley (Region 4) and the Berkshires (Region 5). Each region has a regional supervisor who is responsible for its management and he/she reports to the Director of the Division of Forests and Parks. In turn, the forest and park supervisors, who are responsible for individual forest and park units, report to the assistant regional or regional forest and park supervisors in their region.

#### The Division of Planning and Development

This Division helps generate policy initiatives for the Department's recreation and conservation activities, plans, designs and implements facility improvements, and acquires and administers real property. Headed by the Deputy Commissioner for Planning and Development, this Division is divided into three Bureaus: Bureau of Planning, Bureau of Real Property and Legal Affairs, and Bureau of Engineering.

The Bureau of Planning includes the GOALS program and several other programs designed to promote the provision of quality open space opportunities and protect the Massachusetts environment. Other planning programs include City and Town Commons Restoration, Statewide Recreation Planning, Trail Planning, Olmsted Parks Restoration, Heritage State Parks, the Bay Circuit Greenbelt, the Scenic Rivers Program, Cultural Resource Program, and Natural Resource Planning.

#### LOCATION OF STATE FOREST LAND

Freetown-Fall River State Forest and the Acushnet Cedar Swamp State Reservation are located in southern Bristol County. The Acushnet Cedar Swamp is in the Town of Dartmouth and the City of New Bedford. A forest headquarters is located in Freetown State Forest off Slab Bridge Road in Assonet, a community within Freetown. Freetown State Forest is easily accessible via Route 24 and the Acushnet Cedar Swamp via Route 140. These routes can be accessed from the main arteries I495 and I195 (see the accompanying locus map). The state properties lie approximately 40 miles from Boston and 25 miles from Providence.

## LOCAL AND REGIONAL SIGNIFICANCE

The Forests are within a one hour drive of several million people. Use of the state land has provided motorized and non-motorized trail uses, hunting, and the use of a picnic/wading pool area adjacent to the forest headquarters. There is potential to increase the diversity of recreational opportunities for people in the Boston-South metropolitan area, the Fall River - New Bedford region, and even the Providence metropolitan area.

A 227.5 acre portion of Freetown State Forest was set aside as an Indian Reservation by the Acts of 1939. In 1976, an Executive Order from Governor Dukakis strengthened the Reservation by granting tribal rights to the Wampanoag Nation in this section of the Forest.

The Acushnet Cedar Swamp State Reservation is one of Massachusetts' largest, wildest and most impenetrable swamps. In general, Atlantic white-cedar swamps cover a minor area in comparison to other vegetation types. The National Park Service recognized the ecological merits of this wetland, and in 1971 designated the area as a National Natural Landmark.

The state land has provided wood for energy, wood for lumber, and also provides wildlife habitat. At least two rare and endangered species occur in Freetown State Forest and it is possible that several more are present in the Acushnet Cedar Swamp. The state, municipal and nonprofit conservation lands in this region also provide several incalculable benefits. Trees and other plants act as a natural filtering system to help purify the air we breathe, and this undeveloped vegetated land provides an important source of clean recharge water for aquifers, streams, rivers and reservoirs. The aspect that is hardest to define is the peace of mind gained by many people from even a brief escape to a scenic, natural area in the midst of a landscape changing in character from rural to suburban.

## STATE FOREST HISTORY

15,000 years ago the Freetown area was covered with glacial ice. As the climate ameliorated, the ice gradually melted leaving bare rock outcrops at higher elevations, and everywhere else, a variable layer of crushed rock ranging in size from silt and clay to large boulders. Hardy tundra species followed by boreal species were able to colonize the harsh environment. During the next several thousand years, species that had found sanctuary in warmer climates to the south or on the extended coastal plain gradually migrated back into the area to form forests similar in composition to the present day.

## HYDROLOGY





Ancestors of the American Indians migrated across a land bridge from Asia to Alaska toward the end of the glacial period and expanded their populations throughout North and South America during the next several millenia. Indian land use, particularly the use of fire for hunting and agricultural purposes, affected the nature of the forest stands that were present in New England at the time of European colonization. The Indians present in the Freetown area at the time of contact belonged to the Wampanoag Nation.

The land now occupied by Freetown State Forest was utilized by European settlers for crops and pastureland. Timber was harvested for building materials, firewood and the manufacture of charcoal. Fires were frequent and sometimes consumed large areas of forest during the late 19th and early 20th century when fire suppression forces were poorly organized and timber practices lacked fire precautions.

The first State Forest Commission was established in 1914. It was the Commission's job to survey the state for burned and cut-over lands that could be purchased, at a maximum price of \$5 per acre, for reforestation and forest improvement work by State Foresters. Freetown State Forest began in 1934 when the Department of Natural Resources (DNR) purchased 923 acres for \$4500. Most of the present property was acquired by the end of 1935. Two Civilian Conservation Corps (CCC) camps were located in the Forest from 1935-37, one managed by the U.S. Forest Service and the other managed by the National Park Service. The crews worked on Gypsy Moth control in heavily infested areas, dug water holes for fire suppression, planted trees, cleared the area for the headquarters, garage and parking lot, and cleared and graded most of the roads and major trails found today in the Forest.

A small but important acquisition occurred in 1955 when the state purchased about 60 acres of land at the northern end of the Forest. The parcel includes a natural granite formation that is a startling likeness of a human profile. Profile Rock was a Wampanoag Nation holy site.

A 1989 acquisition, by Massachusetts Division of Fisheries and Wildlife, of 210 acres from the Acushnet Saw Mills abuts Freetown-Fall River State Forest and will be managed by the Department of Environmental Management. This acquisition brings the total acreage of state forest in Freetown and Fall River to nearly 5700.

The nearly 2000 acre Acushnet Cedar Swamp State Reservation was acquired by DNR in 1971. This exemplary wetland is now managed by DEM as a satellite of Freetown-Fall River State Forest and is therefore included in this GOALS plan.

## REGIONAL WATER AND LAND MANAGEMENT

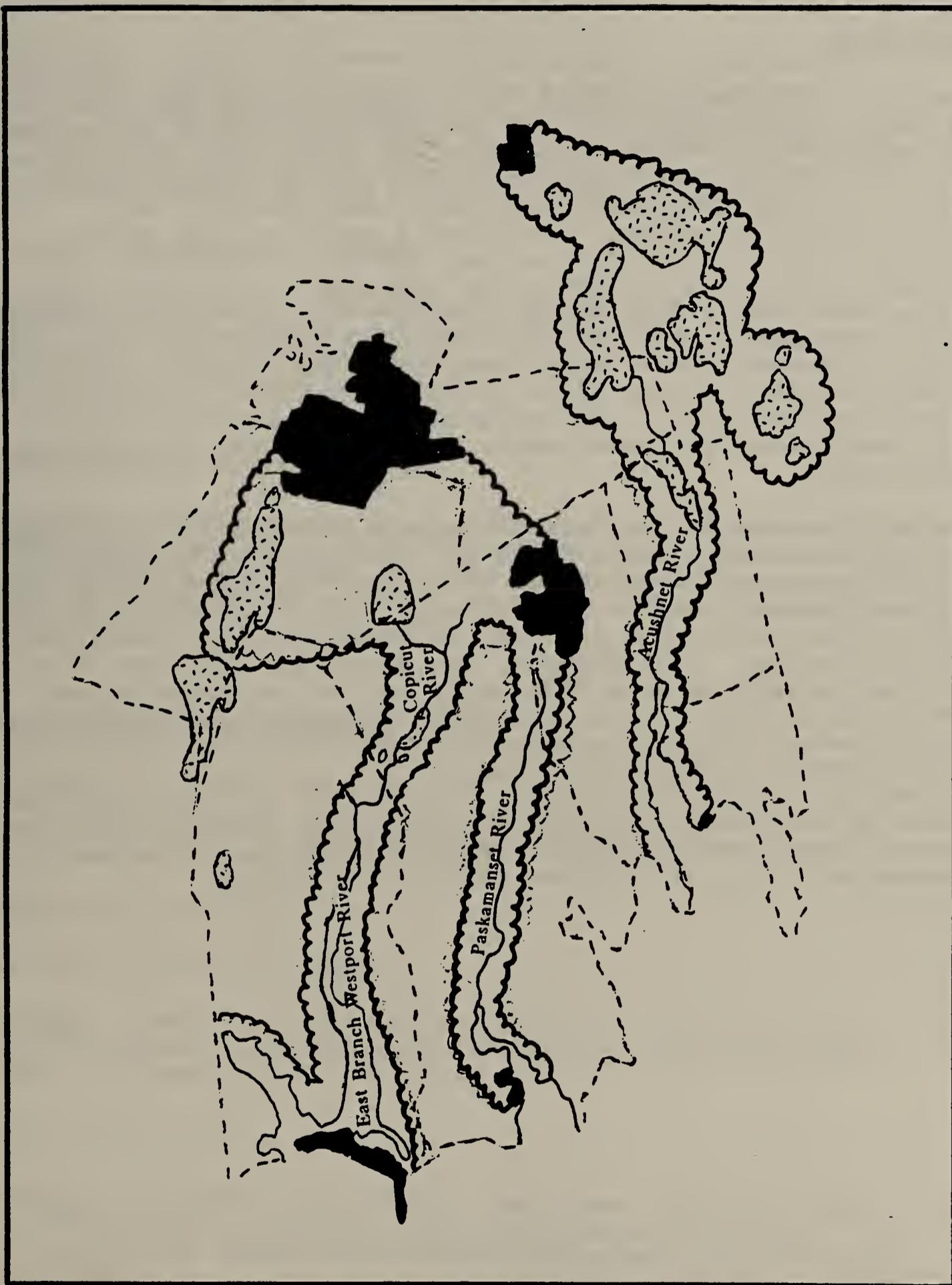
Water is our most precious resource. Due to the amount of precipitation in southern New England we are fortunate to normally have an adequate quantity of water. The water quality is, however, another story. The coast of Bristol County includes important anchorage points for the state's fishing industry, and yet, the harbors and near shore waters are nearly unfishable due to pollution.

The continued healthy existence of communities in the New Bedford - Fall River region is very much dependent on a clean, sustainable water supply. A protection strategy that recognizes surface and ground water is an appropriate focus for the regional open space system.

River corridor, or "greenway" protection is an example of such a strategy, combining recreational open space and water resource protection objectives. Riparian wetlands and floodplains are largely protected from development through existing regulations. However, the function of these resource areas in supporting wildlife, storing runoff, filtering pollutants, and providing open space can be enhanced through the preservation of upland vegetation along the entire length of the river, especially where the upland areas are part of aquifer recharge systems or provide wildlife habitat.<sup>1</sup>

A water protection greenbelt system in southern Bristol County could include Massasoit State Park connecting southeast and southward through the Lakeville lakes (portions of the watersheds for these large lakes are already protected, but major tracts are in danger of development that would directly affect the Taunton and New Bedford water supply). Long Pond is the source of the Acushnet River, and the greenbelt continues with a corridor along the Acushnet River, through the old New Bedford Ponds, and continuing through Acushnet, New Bedford and Fairhaven to Buzzards Bay. A second important potential greenbelt further to the west originates in a huge tract of forested land made up by Freetown - Fall River State Forest, the Acushnet Saw Mills property, the Acushnet Cedar Swamp State Reservation, and Fall River's watershed land. This area recharges Fall River's reservoirs, and is the headwaters for the Copicut River, the East Branch of the Westport River and the Paskamanset River. These rivers should also be protected with a wide buffer of open space all the way south to their estuaries. Although portions of this open space system are already protected, there is still a great deal of work needed to make this idea a reality.

<sup>1</sup> C. Thomas, Director of DEM Rivers Program.



State Forests and Reservations

Municipal Boundaries

Ponds and Reservoirs

Proposed Greenbelt

## LAND STEWARDSHIP ZONING

### INTRODUCTION

The analysis of Freetown State Forest and the Acushnet Cedar Swamp State Reservation involved the determination of management zones based on the present use, possible future use, and the sensitivity of existing resources. The zoning classification system provides a management directive that enhances DEM's ability to provide optimum recreational opportunities while protecting the sensitive natural and cultural resources. In decreasing order of sensitivity the management zones are: Unique Resource Zone (URZ), Environmental Protection Zone (EPZ), Natural Resource Management Zone (NRMZ), Developed Lands Zone (DLZ). By dividing a property into these zones it is possible to regulate activities within certain areas so that sensitive or vulnerable resources are protected. In addition, it is possible to guide future development and improvement into sites that can tolerate intensive use.

Following the approval of this management plan and accompanying zone classifications by the Board of Environmental Management it will still be possible to change the zones. If resources at a specific site are found to be more sensitive or significant than originally perceived, the area can be moved up into a zone for greater protection. For example, the discovery of a rare plant in an area designated as a NRMZ would warrant an upzoning to Unique Resource Zone. If a previously unstudied historical site was to be recognized by the Massachusetts Historical Commission a similar upzoning process would occur.

In order to downgrade the level of protection, such as from the EPZ to the NRMZ, environmental review through the Massachusetts Environmental Policy Act Office (MEPA) is required.

## UNIQUE RESOURCE ZONE

### Natural Areas Subzone

Purpose: protect an areas unique natural resources for their scientific, ecological, and educational values. Natural areas will be managed in order to maintain or enhance significant resource features. Examples include: habitats for rare plant and animal species, exemplary natural communities, and unusual geologic features.

### Cultural/Historical Subzone

Purpose: recognize and provide for the protection of an areas cultural, visual, or historic features. Examples include: archeological sites, historic sites, historic landscape ruins, and homesteads.

## ENVIRONMENTAL PROTECTION ZONE

Purpose: offer protection to soil, water, and other natural resources which may suffer irreparable damage by inappropriate management or use. This zone is designed for land which is sensitive for a specific reason: steep slope, erodable soils, wetlands, etc.

## NATURAL RESOURCE MANAGEMENT ZONE

Purpose: designed for land which can appropriately provide sustained yields of forest and agricultural products, water resources, wildlife and dispersed outdoor recreation.

## DEVELOPED LANDS ZONE

### Intensive Recreation Areas

Purpose: designate land areas capable of providing high quality outdoor recreation and sustaining relatively large numbers of participants at one time.

### Administration Areas

Purpose: designate and provide land areas and facilities for the efficient administration of forests and parks. This is the area for administration and maintenance buildings and facilities.

### Reserved Areas

Purpose: designate land suitable for future Intensive Recreation Areas or Administration Areas.

## **ZONES AT FREETOWN STATE FOREST AND THE ACUSHNET CEDAR SWAMP STATE RESERVATION**

The GOALS team reviewed the existing conditions information in order to establish the management zones. The Freetown State Forest Advisory Council was requested to offer constructive criticism of the zoning scheme.

### **Unique Resource Zone**

In Freetown State Forest the sites containing endangered species (Climbing Fern, Mystic Valley Amphipod and Marbled Salamander) and a surrounding buffer area are zoned under this classification. The buffer is required because protection of habitat calls for a sufficient amount of surrounding upland to provide water runoff and nutrients. In addition, a species does not necessarily stay in one place over time and may require room to move or adjust to slight changes in environmental conditions. In the case of an endangered species occurring in a wetland, the surrounding watershed buffer protects against changes in runoff, nutrient load, sedimentation and oxygen level, and could therefore be considered essential habitat.

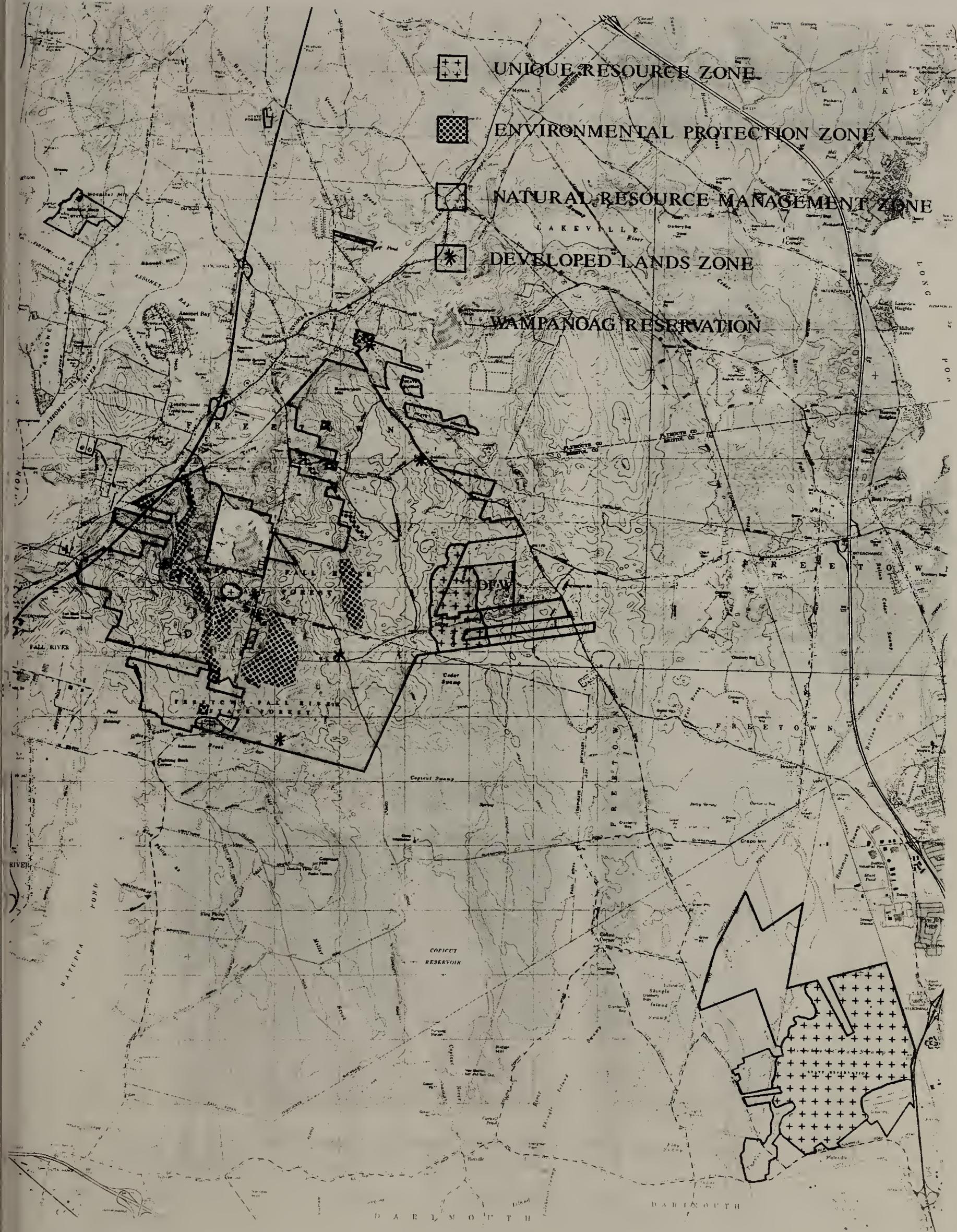
In the Acushnet Cedar Swamp State Reservation the entire Atlantic White-Cedar swamp community will be protected with the Unique Resource Zone status. This exemplary wetland provides habitat for several rare and endangered species, and the cedar swamp vegetation type has a very limited distribution in New England.

### **Environmental Protection Zone**

Many of the sites noted on DEM's Baseline Historical Resource Inventory will be protected with a four acre buffer under this zoning classification. The sites are not presently recognized by the Massachusetts Historical Commission (MHC), but with professional archaeological research the sites could be determined to be historically significant. Zoning the sites under the Environmental Protection Zone affords protection and also gives the flexibility for possible upzoning to Unique Resource Zone if the site is recognized in the future by the MHC.

Sensitive wetland areas in Freetown-Fall River State Forest have also been classified in the Environmental Protection Zone including Rattlesnake Brook and Terry Brook with a surrounding buffer, and two large swamps in the south-central portion of the Forest.

# LAND STEWARDSHIP ZONING





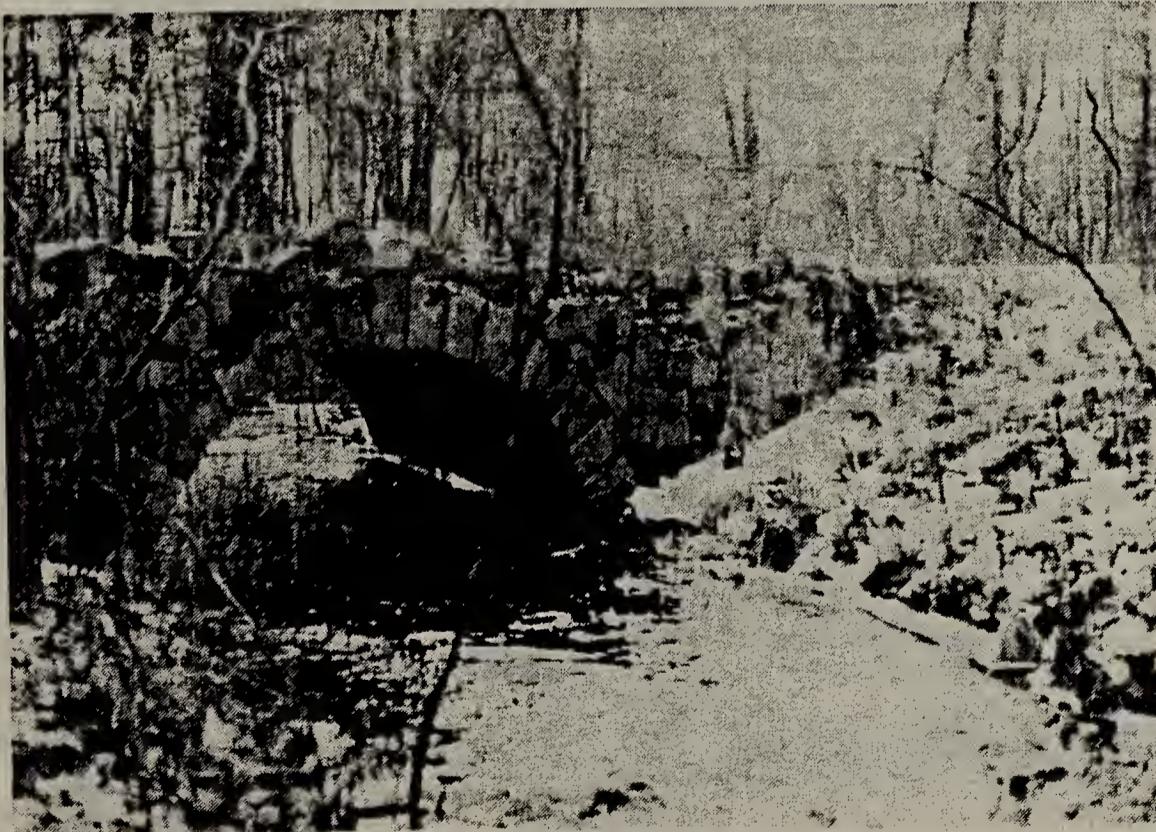
### Natural Resource Management Zone

A majority of the land area is zoned under this classification because the Forests can tolerate management for dispersed outdoor recreation, wildlife, and sustained yield of forest products without degradation of the resource.

The management guidelines of this zone, coupled with the existing Wetlands Protection Act and Forest Cutting Practices Regulations provide for the protection of wetlands and wildlife habitat. There are, however, steep slopes and wet areas in Freetown State Forest that should be monitored for the damaging effects of trail use. These areas may also have to be restricted from forest management activities. In addition, fire suppression holes dug by the CCC may be breeding habitat for rare salamanders. If these holes are to be brought back to their original capacity, they should first be checked for rare species. It may be necessary to upzone such sites to Environmental Protection Zone in the future in order to better protect the resources.

### Developed Lands Zone

The existing headquarters area is classified under the Administration Area subzone. The day-use area and several recreational parking areas are classified under the Intensive Recreation subzone.



A granite bridge constructed by the CCC spans Rattlesnake Brook.

## RECOMMENDATIONS

### WATUPPA WAMPANOAG RESERVATION

#### Acts of 1939, Chap. 384.

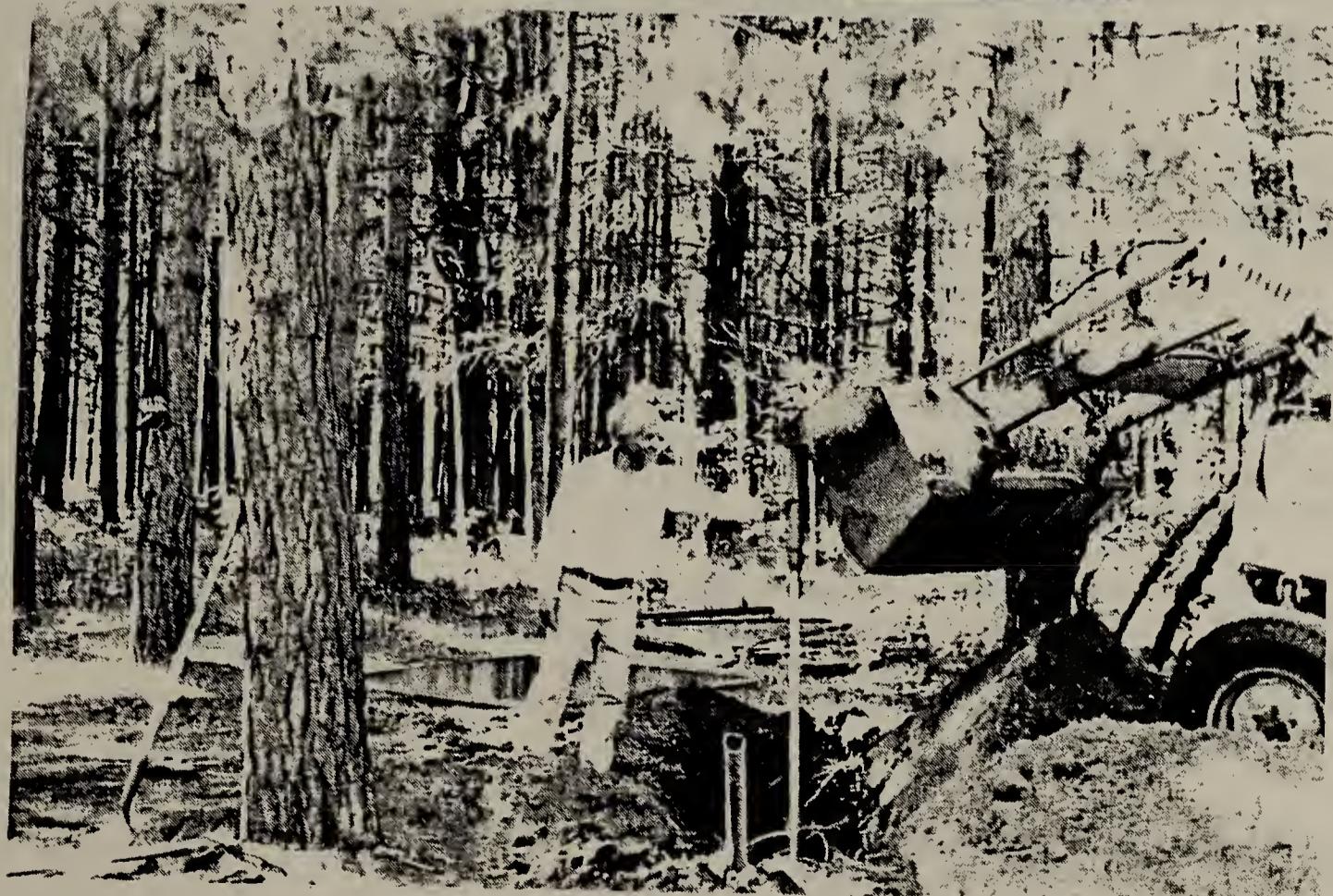
The Commissioner of Conservation, on behalf of the Commonwealth, may establish within the Freetown-Fall River State Forest an Indian Reservation to comprise such portion or portions of said Forest as in his judgement will best serve the desired purposes. He shall have the boundaries of such reservation surveyed, defined upon the ground and shown on a plan which will be filed in his office. Within the area so determined he may cause to be constructed a combination museum building and caretakers quarters, together with such smaller structures as may seem to him desirable in connection with the manufacture and dispensation of Indian products, and may prosecute work of any nature relating to such structures and their surroundings. With or without the cooperation of the United States government or any agency thereof, he may arrange for the building of homes within said Reservation for approximately twelve families of the Pocasset (Wampanoag) tribe of Indians, and shall have complete jurisdiction at all times over the Reservation so established and general supervision of the activities carried on within its boundaries.

#### Excerpts from Executive Order #126 of 1976

WHEREAS, the General Court of the Commonwealth has enacted a Statute (Act of 1939, C.384) authorizing the Commissioner of Conservation to establish a Reservation within Freetown-Fall River State Forest; and

WHEREAS, in 1945, the said Reservation was laid out, and established in accordance with the authority conferred by the aforesaid Act of 1939, but has not been further developed;

In support of the concept of Native American self-determination, the Secretary of the Executive Office of Environmental Affairs and the Commissioner of Environmental Management shall take appropriate measures to insure that the wishes of the Gay Haed Wampanoag and Mashpee Tribes, as expressed by their governing bodies, shall be followed in the management and development of the Wampanoag Reservation within the Freetown-Fall River State Forest.



Driving a well pipe in the Wampanoag Reservation. Chief Windsong  
steadies the pipe.

DEM will cooperate with the Wampanoags in the development of the Watuppa Reservation. Cooperation may include, but is not limited to:

- Use of vehicles to transport materials.
- Use of equipment to assist in well drilling and structure development.
- Use of materials cut by the portable sawmill from DEM sawtimber.
- Personnel assistance when available.
- DEM will continue to request state funding for the Reservation.
- DEM will seek the most efficient way to grant the Wampanoags greater control and ownership of the Reservation. Federal funding for the Reservation development may be available if there was a different ownership status.

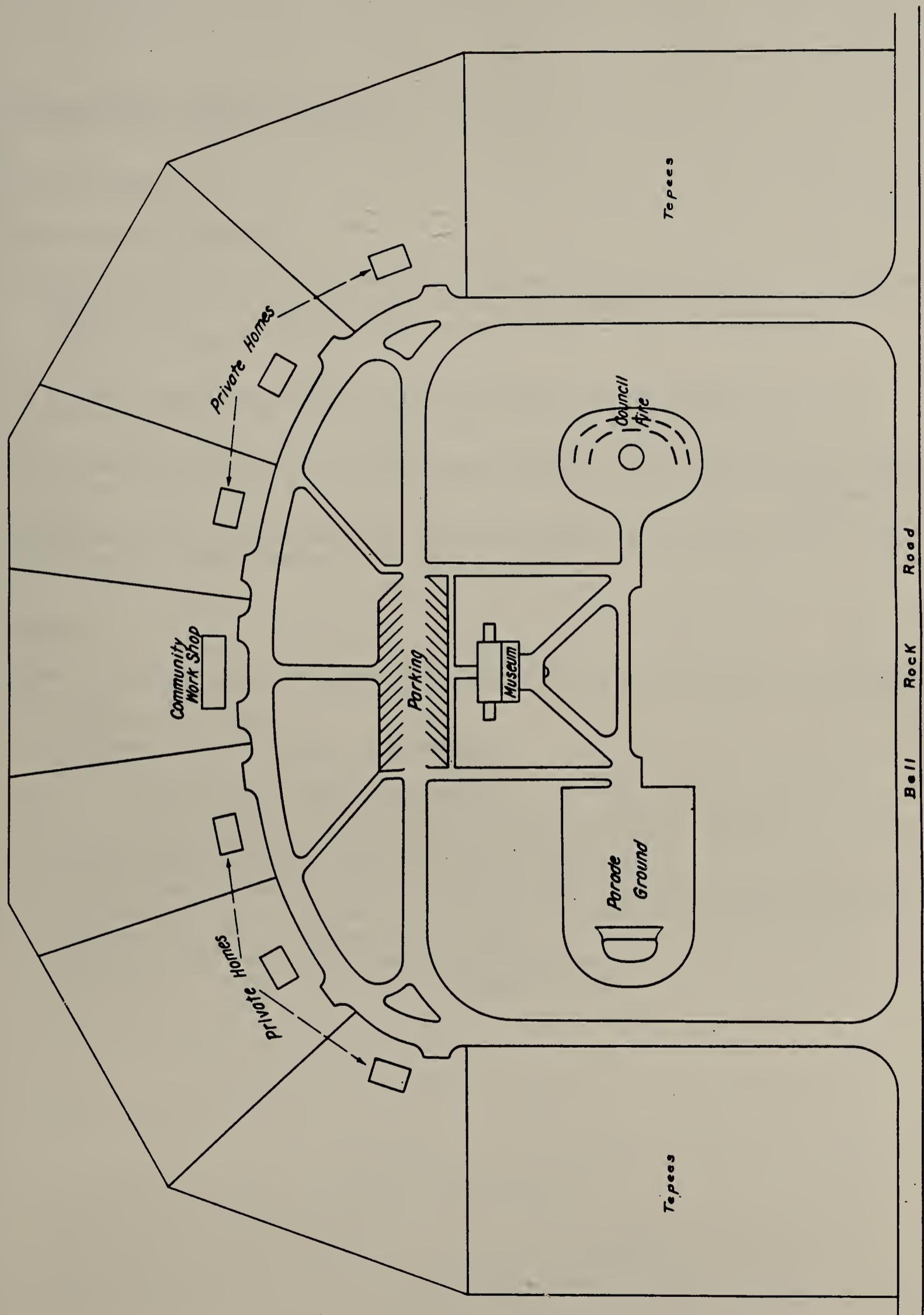
Wampanoag goals for development include:

- Well(s).
- Pavilion.
- Caretakers quarters/ museum building.
- Housing for up to twelve families.

A permanent presence on Watuppa Reservation will be very beneficial for DEM management of the Forest, particularly in terms of interpretive program potential, public relations, and the reporting of unauthorized activities.

The following map depicts a plan that was developed by the Department of Conservation soon after the legislature passed the Acts of 1939, Ch.384. The Wampanoag working group in coordination with DEM Region 1 staff will proceed with this plan as funding, people, building permits, etc. become available.

Any development plans, determined by DEM's Region 1 staff to be unrelated to the 1939 plan, must be reviewed by the Indian Commission prior to being submitted for approval to the Commissioner of Environmental Management.



Plan for Proposed  
Community Center for Indian Reservation  
Freetown State Forest - Freetown, Mass.  
Scale 1:48 Foot. Aug. 16, 1939.  
Massachusetts Department of Conservation.  
Ernest J. Deen - Commissioner.



## FREETOWN STATE FOREST

### RECREATION

#### Hunting and Fishing

- o Hunting will continue to be a recreational activity at Freetown State Forest subject to Division of Fisheries (DFW) regulations. Hunters will be excluded from the Watuppa Wampanoag Reservation.
- o A deer checking station will continue to be managed by the Freetown State Forest Supervisor at the Forest Headquarters.
- o A hunter utilization study conducted by DFW in cooperation with forest staff would be valuable for future wildlife management.
- o Fishing will be permitted in Rattlesnake Brook subject to the licensing requirements of DFW.

#### Trails

The following factors were considered during the trails planning process:

- Safety of users.
- Recreational supply and demand.
- Soils.
  - Limitations due to wetness.
  - Limitations due to steep slope or large stones.
- Rare and endangered species habitat.
- Management wishes of the Wampanoag Nation.
- Management wishes of the Division of Fisheries and Wildlife.
- Historical and archaeological sites and potential sites.
- Damage to fire suppression roads.
- Possibility of trail-less natural area.
- Quiet zone near the forest headquarters.

- o Trails are designated for each major trail user group. Signs will indicate these trails in the Forest. The trails and trail head locations are shown on the following recreation map.
- o Maps with the designated trail system should be available for public distribution.
- o For special events, user groups must obtain special use permits and may be able to use trail mileage increased from the groups designated trail system.
- o More than one user group has been assigned mileage on the same sections of woods road in the eastern part of the Forest. To alleviate the possibility of conflicting use, informational signs will be posted at the forest headquarters and possibly at the beginning of shared-use segments of trail. This information should also be apparent on the trail map.
- o A majority of trail conflicts in Freetown State Forest are caused by three and four wheel ATV users. The Advisory Council recommends that the state increase coverage by DEM Park Rangers and Environmental Police Officers on as many weekends as possible. Freetown State Forest trail users are hoping that informational posting about the opening of ATV trail mileage at Myles Standish State Forest will ease the burden on Freetown.
- o DEM may limit use or close trails during the height of mud season as determined by the forest supervisor.



Dog sledders use a wheeled sled to excercise their dogs during the warmer weather.





- o Freetown State Forest has a successful Adopt-a-Trail Program in place. The Pilgrim Sands Trail Riders have constructed three gates with the cost of materials and labor estimated at \$3000. They have also flagged new routes for portions of their trail system to alleviate conflicts with other user groups and will cut these new sections. The dog sled user group has donated truck loads of gravel and graded sections of their trail system. They have also repaired culverts. DEM will continue to promote the Adopt-a-Trail Program for the other major trail user groups.
- o Long-term trail planning for Freetown State Forest may include:
  - Increased mileage for hikers and cross-country skiers.
  - Regional long distance trail connections, particularly in coordination with the owners of Acushnet Saw Mills.
  - Development of a handicapped accessible trail loop.  
Information on the physical requirements for handicapped trail construction should be gathered from:
    - 1) DEM's Region 5 where a trail was successfully implemented at Pittsfield State Forest.
    - 2) The Office of Handicapped Affairs.
    - 3) A variety of manuals that explain surfacing, width and slope requirements.
    - 4) Most importantly, by direct consultation with handicapped individuals.

#### Fox-hound Running

This will continue to be a recreational activity through special use permit. The Brunswick Fox Hound Club should continue to coordinate with the Forest Supervisor, the Wampanoags, and other user groups.

#### Water-based Recreation

- o Regional recreational surveys show that there is a strong need for more water-based recreation facilities. A long-term goal, which would involve substantial capital funding and increased staffing, is the damming of Rattlesnake Brook to create a small man-made pond.
- o The wading pool in the day-use area will be maintained and water samples regularly analyzed to insure public health standards.

### Interpretation

- Freetown State Forest warrants a complete interpretive plan. This could either be conducted by a DEM professional interpretive planner, if and when the position is funded, or by a consultant hired on a part-time basis specifically for Freetown State Forest with funding from a local corporate sponsor.
- Interested individuals from the Advisory Council or the surrounding communities may organize an interpretive subcommittee to coordinate in the development of an interpretive plan.
- A suggestion for the main theme of the interpretive plan is Wampanoag culture. Advisory Council members have suggested a regional context for interpretation, including many sites apart from Freetown State Forest in Plymouth County and Bristol County.
- In the interim, before an interpretive plan is completed, the Freetown State Forest Supervisor will coordinate with the Bureau of Interpretive Services and the Fall River Heritage State Park (HSP) to bring groups of people from the HSP on interpretive excursions to the Forest.
- The forest supervisor is coordinating with Freetown Elementary School to set up a nature trail across from the school. DEM should continue to work with the local school system on this and other educational programs.

Advisory council members have suggested coordinating with the Freetown Historical Society and the Massachusetts Audubon Society for assistance in the development of wayside interpretive signs in appropriate locations on other hiking trails.

- A note of caution: Interpretation will increase knowledge and therefore appreciation of the resource in a majority of people, but more people means more impact to the site. If a site is to be interpreted, it must be protectable. The site should be assessed as to its vulnerability to regular visitations.

## RESOURCE MANAGEMENT

### Silviculture

- o Many boundaries are obscure and need to be remarked and some need to be resurveyed.
- o In general, shelterwood cuts are recommended for mature forest stands composed of White Pine or White Pine-hardwoods in order to promote growth of the White Pine component. The shelterwood system is a series of two to three cuts, retaining enough trees to provide half shade or more on the ground. The last cut is aimed at obtaining natural regeneration from the best overstory trees (seed trees), which also provide shade for the new understory. The three cut system would be more frequently used than the two cut method at Freetown-Fall River State Forest. The two cut method may be utilized when the stand is predominately composed of good quality mature oak.

In mixed hardwood and mixed oak stands, improvement cuts and thinnings are the most frequently recommended procedures. These timber harvesting practices are aimed at improving the composition, growth and quality of the remaining forest trees. It may be possible to combine this procedure with a Home Fuelwood type of program. The Region 1 Management Forester or a forest consultant would mark the trees that were recommended to be removed.

Areas with a red maple overstory or sparse overstory are to be maintained for wildlife either by selectively thinning or with no treatment.

Stand conversion to a more desireable tree species like white pine is recommended for many areas of low quality upland oaks and hardwoods.

Detailed recommendations are given on the stand analysis tally sheets.

### Forest Protection

- o The Bureau of Shade Tree Management and Pest Control will continue to conduct hazardous tree surveys in the state forest land in Freetown and Fall River. The cutting crew will be utilized when their arborcultural skills are required. Annual insect and disease surveys will continue in order to closely monitor buildup of populations. The Forest will be used for future research programs.
- o The Bureau of Fire Control will continue to provide fire protection services through fire tower operation. Suppression efforts will continue with mutual aid to municipal fire departments in Bristol County, and will also protect state forest lands in District 3. It is important to educate youngsters in our school system about the danger of fire and the value of our forest resources through the Smokey the Bear Program and special events.
- o Access should be maintained to all areas of the state forest for purposes of forest management and fire control.



Due to the rocky soil types, dirt roads in the forest must be frequently graded to maintain accessibility.

### Wildlife Management

- o Leave all stages of dead and decaying trees in as many locations as possible. Numerous species use this habitat throughout the decay process.
- o To improve wildlife habitat keep some areas in early stages of succession. Clearings are beneficial for many species of wildlife that favor habitat on the edge between forest and field for cover, forage and reproduction.
- o Maintain as diverse a cover as possible with all different stages of succession and diversity in plant species composition.
- o It is possible that the CCC fire suppression holes are breeding and rearing habitat for several species of amphibians, including rare or endangered salamanders. The man-made pools should be surveyed for this possibility prior to any dredging activity.
- o DEM will continue to cooperate with DFW in the management of the 826 acre wildlife management area in Freetown State Forest. With increased personnel, the forest staff could gradually reclear the grid lines and wildlife plots with help from DFW.
- o DEM will continue to cooperate with the DFW stocking programs in the Forest, including Pheasant, Snowshoe Hare and Turkey.

### Historical Resource Management

- o A state archaeologist or an archaeological consultant should thoroughly research the Native American, mill and dam, quarry, and house sites in Freetown State Forest. Hiring an archaeological graduate student is a time and cost effective method if a state archaeologist position is not filled. The graduate student would, however, have to be approved by the Massachusetts Historical Commission.
- o Any development, trail relocation or forest management activity must take into consideration the preservation of known and potential historical sites. The best management for archaeological sites is preservation in place by avoidance if possible.

### Staffing and Funding

- o Freetown State Forest - Acushnet Cedar Swamp State Reservation Management Unit

#### Equipment:

-Replace 1967 Ford Tractor with a new tractor with the following attachments; front end loader, back hoe, articulated mower, chipper, and aerator.

-Replace 1973 Chevy Rack Truck with a new dump truck w/plow.

-Replace 1954 Willys with a new 4X4 pickup w/plow.

#### Staffing:

Staffing requirements for this management unit are based on the 1987 "Methods of Weighing and Comparing Levels of Responsibility in the Massachusetts State Forests and Parks". The model indicates that the Park Supervisor position should be upgraded to Senior Forest and Park Supervisor, and the supervisor should have the following staff:

-Two year-round Skilled Conservation Workers.  
-One year-round Laborer.  
-Four seasonal Laborers.

- o In order to facilitate the Bureau of Shade Tree Management and Pest Control's various tasks on this Forest:

- 1) The understaffed cutting crews should be brought up to full complement.
- 2) The cutting crew positions should be upgraded in order to attract qualified personnel.
- 3) Vehicles and equipment should be updated.

- o Bureau of Fire Control

Some of the vehicles are twenty or more years old and need to be replaced:

New pickup truck to replace 1971 Dodge Patrol Truck.

Brushbreaker w/500 gallon tank to replace two 1970 Powerwagons.

Due to high population density and the location of several cities, District 3 is one of the busiest areas for fire control in the Commonwealth. It is important that all positions assigned to District 3 be filled so that the crew will be able to effectively provide prevention, detection and suppression services for Bristol County. As of May 1990 this would mean adding:

One Truckman for the District 3 headquarters.

One Truckman assigned to Massasoit State Park.

One year round Tower Operator.

Two seasonal Truck Helpers.

One seasonal Tower Operator.



The quarry ledge has been defaced with graffiti and the quarry pool has received many stolen vehicles.



The borders of the state reservation are a favorite target for illegal trash disposal.

### Law Enforcement/Illegal Access

- Twenty gates are needed. The Forest Supervisor will prioritize locations. Particular attention will be given to areas where illegal dumping has been occurring.
- Coordinate with the state DPW to put in guard rails along approximately one mile of Route 24.
- If possible, limit access points to only Copicut Road and Payne Road.
- Informational posting of rules and regulations at entrances and trail heads.
- Housing for Park Police mounts constructed at Freetown State Forest.
- Lobby legislators to increase funding for Environmental Police Officers (EPO's) so they can increase staff, use overtime, and increase travel time available to them, and also to increase support and funding for DEM's Park Ranger Program and the Deputy EPO Program.
- Continued erosion control/grading of unpaved roads will help with law enforcement access.
- Continue to encourage municipal law enforcing authorities to help in the state forest.
- Determine most cost effective method to remove graffiti from the ledge area, e.g. high pressure water, chemical removal, or rock paint. It is important to immediately remove new graffiti because in other cases this has led to success in gradually eliminating the problem.

### Volunteers

- Several volunteer cleanups have recently been organized for Freetown State Forest. The cleanups should become an annual event or be organized as needed.
- An Adopt-a-Trail Program has already been started with active participation of dog sledders, snowmobilers, and trail bikers. This program should be continued and expanded to include other user groups.

- o Following completion and approval of this management plan, the Advisory Council may wish to organize meetings in order to address important regional open space and recreational issues as they arise. In particular, working groups to address the development of the Watuppa Wampanoag Reservation, trails planning, and interpretive planning should remain organized.
- o Volunteers should be recruited for any activities that would be helpful to the Forest Supervisor.

#### Capital Requests

- o New handicapped accessible comfort station for the day use area with running water and heat for year-round use.  
DEM Bureau of Engineering will provide cost estimate.
- o Contract to upgrade the Forest Headquarters and Fire Headquarters for handicapped accessibility, and to study the possibility of a structural connection between the two headquarters.  
DEM Bureau of Engineering will provide cost estimate.
- o Road gravel/grading/rehabilitation.  
Estimated cost - \$100,000
- o Slurry seal roads, parking lots.  
Estimated cost - \$5000

#### Force Account

- o Wooden shed razed and new shed/garage constructed.
- o New contact station.

#### Land Transactions

- o DEM should carefully consider the impacts to many sensitive resources, including historical sites, endangered species habitat, and the watershed of Rattlesnake Brook prior to any requested land exchange for environmentally degrading uses.
- o DEM should coordinate with the Department of Fisheries, Wildlife and Environmental Law Enforcement to fund the purchase of the remaining 3800 acres of the Acushnet Saw Mills property. This should be done as quickly as possible so that the land will not be lost to development.
- o Several important inholdings exist in the Forest, including the horse farm, Doctors Mill Pond, and notches of land around the perimeter of the Forest. The Advisory Council and DEM planning team recommend that these parcels be placed on the acquisition priority list. DEM should remain aware of the ownership status and future availability of these parcels.

## ACUSHNET CEDAR SWAMP STATE RESERVATION

- o Continue cleanup activities, coordinating with volunteer groups and the New Bedford DPW.
- o Review and comment on Environmental Notification Forms and Environmental Impact Statements for any projects proposed in the industrially zoned land in Dartmouth and New Bedford, abutting the State Reservation.

Continued existence of the Atlantic White-Cedar swamp community, and associated rare and endangered species, depends upon a delicate balance of water. Development north of the swamp could disturb the water level, movement and quality, thus altering the botanical character of the swamp.

- o Eventual inclusion of this National Natural Landmark in the Massachusetts Wildlands Program as a state Representative Natural Area. The nomination packet including management guidelines should be organized in coordination with the National Park Service, the Natural Heritage Program, and the Lloyd Center.
- o Shoreline and non-motorized boat fishing on Turner Pond will be permitted subject to licensing requirements of DFW.
- o A fish survey and fisheries management guidelines will be requested from DFW.
- o Hunting will continue to be permitted subject to DFW regulations.
- o Forestry recommendations for the upland forest types surrounding the swamp are outlined in the Management Forester's stand analysis.
- o Possible capital requests:

Design and construction of an interpretive boardwalk into the outskirts, not the interior, of the Atlantic White-Cedar swamp community.

Water-based recreation facilities for Turner Pond.

Both of the above would require increased staff in addition to capital funding.

## ACKNOWLEDGEMENTS

This report was prepared as a cooperative effort between the Division of Forests and Parks and the Division of Resource Conservation, Department of Environmental Management.

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